

## **STUDYING AND PREVENTING MYOPIA IN CHILDREN AND ADOLESCENTS**

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**Abstract:** Currently, 290 million people around the world have myopic eye disease. Only 19 million of them are young people under the age of 18. 40% of people with myopia are blind. Today, eye diseases, including myopia, are considered epidemic. Types of myopia, causes of origin, causes of increase, measures to prevent its exacerbation and advice and a number of solutions to ensure that healthy children do not have myopia are considered as urgent problems.

**Key words:** myopia, pseudo-myopia, progressive myopia, innate and life acquired during myopia, laser correction method.

Currently, 290 million people around the world have myopic eye disease. Only 19 million of them are young people under the age of 18. 40% of people with myopia are blind. Myopia is preventable in 80% of people. According to statistics, in 2006, 45 million people and 13 million children (aged 5-15) suffered from nearsightedness. By 2015, the WHO was the first to point out that myopia had reached the level of an epidemic: "In all corners of the world, these indicators are growing rapidly." By 2018, the number of people affected by myopia was 1.4 billion.

Myopia is already common in some countries. These include Southeast Asian countries - Taiwan, Hong Kong, China, Malaysia, including Japan. About 80% of the population under the age of 18 already suffers from myopia. Currently, there are about 1.4 billion people in China, and almost half of them - about 600 million - have myopia. In China, 40% of primary school students and 70% of students suffer from myopia. In Europe and North America, the percentage of myopic people is one and a half times less. Their number is 30-50%. However, this figure is much higher than a few decades ago, but Europeans spend less time on gadgets. In the USA, myopia is found in 10% of elementary school students. According to WHO research, 6-8% of primary school students have myopia, and their rate at the end of school is 50%. Eye diseases are very rare in the world, only in Cambodia, it is difficult to even meet a person wearing glasses. It turns out that Cambodia is a predominantly agricultural country, where most people live a simple life, meaning they don't use gadgets.

Myopia, also known as nearsightedness or farsightedness, is a condition in which light is refracted incorrectly, in which distant objects appear blurry and near objects appear clear. This occurs due to the imbalance between the length of the eyeball and the focusing power of the visual system, and as a result, the image of a distant object appears in front of the retina. The development of this disease corresponds to the age of 9. The degree of myopia increases with age and stabilizes when the child reaches the age of 20, that is, when the body is formed. There are two types of myopia. The first one is pseudo-myopia, which is the hardening of the focusing muscle due to long-term work at near distances. The second is progressive myopia (lens-induced myopia) caused by the lens. The lenses temporarily relieve the symptoms of pseudomyopia, but as a result, your eye begins to stretch, and you begin to need stronger lenses.

According to Central Asia 2020 statistics, 0.3% are blind people, 11.1% are people with serious eye diseases, and 50% are people with eye problems. people make up. This ratio of men and women differs by 1.1. As of December 20, 2020, 60,000 people in Uzbekistan complained about eye diseases. By now, this indicator has increased significantly. Especially the part of the population of Uzbekistan living in the capital complains of eye diseases more than those in the regions. Mainly because eye diseases begin to develop in young children, we can see them in the elementary grades. Causes of myopia in children. The causes of myopia in children can be different: genetic factors, weakened sclera, primary weakness of accommodation, environmental conditions, poor nutrition, fatigue, weakening of the body due to various diseases and other factors. The appearance of myopia is mainly associated with genetic predisposition. The tendency to develop myopia is often passed on to children from their parents. In addition to genetic factors, the development of myopia depends on the child's visual strain at close distances (when reading or working on a computer). If the eye muscles, which are responsible for focusing vision at close distances, work with tension for a long time, they cannot relax when looking at a long distance during near work. As a result, the eye is always in a state of tension, which leads to the development of myopia.

It is emphasized that the development of myopia in children is related to general diseases of the body. Therefore, timely treatment of scoliosis, tonsillitis, children's infections, caries and other chronic diseases in children is very important to prevent myopia.

A child's proper nutrition also plays a big role in his eyesight. Because the same type of food, lack of vitamins can sometimes lead to the development of myopia in children. Unlike the village children who spend most of their time in the nature and eat fruits and vegetables and various other foods, he usually spends his time in the room, instead of eating well, he eats this thing in various places. Myopia is more common among students.

Poor lighting of the study area at home and in the classroom, and the fact that the desk is not suitable for the child's height, sometimes cause great damage to the child's eyes. Also, sitting incorrectly during class preparation, working too much at the computer can lead to the development of myopia. Harmful habits, such as writing or reading with the head bent too far, cause eye strain.

Parents with myopia should take their child with good vision to an ophthalmologist once a year, taking into account that the disease is passed from generation to generation. This does not necessarily mean that vision problems will occur. But the risk of disease is 60-80 percent. Congenital myopia is very dangerous, because of this, distorted, blurred images reach the brain. That is, the ability to see does not develop in the cells of the cerebral cortex - the parts of the brain that stabilize the ability to see. In most cases, if treatment measures are taken, the child will overcome the disease of myopia by the age of 6 and completely recover the ability to see.

The purpose of the study: Studying the incidence rate of myopia among 6-9-year-old children and the importance of the social hygiene factor in the origin of the disease.

Research objects and methods: Elementary school students of primary school No. 315 of Almazor district of Tashkent, No. 34 general school of Nishon district of Kashkadarya region and preschoolers of No. 368 of Yunusabad district, No. 407 of Chilonzor district and No. 27 of Okhangaron district. A total of 727 pupils and pupils of the institution serve as research objects. In the research, statistical, questionnaire and methods of obtaining extracts from the personal outpatient card (026f/u) where the results of the medical examination of each student were recorded were used.

Research results and discussion: According to the results of the investigation carried out in the research facilities, among 6-9-year-old preschool and elementary school students, eye diseases neglected by parents during school admission processes are myopia. Different levels were determined. It was noted that 85% of mothers had no complaints about seeing their children. In the conducted in-depth medical examinations, it was found that 13.6% of the 727 students and children under study had the initial symptoms of myopia. As a result of the analysis of the children's eating habits in the questionnaire, the daily menu of our 6-9-year-old children under the study is limited in the range of foods, among the products rich in vitamin A, which are important for vision, are red carrot salads. and they mentioned that they do not eat products such as red carrot juice, eggs, fish meat and its oil, butter and cream at all. As a result of a survey conducted among children, it was found that when asked about the order of drinking water, 33.2% of children prefer to drink sugary tea, water in sweet packaging, juices instead of water when they are thirsty. In addition, among students with initial signs of myopia, 17.3% of them do not follow the daily routine enough, and if the parents leave them a little unsupervised, we have information about the fact that children engage in phone games for a long time. . As a result, it became known that children who go to bed late wake up for morning classes with great difficulty and limit themselves to dry cookies or packaged sweets because they do not have time to eat breakfast. As a result of the study of food rations during the day, it was found out that they do not eat different vegetable salads. From these results, it is clear that there is an influence of the daily routine and the food consumed in preventing the development of eye diseases in the growing organism.

**Conclusion.**

To detect the disease in time, it is necessary to check the child's eyesight constantly (especially at one year old, when he turns 3 years old, and then every two years). Such tests are especially important if the parents developed myopia at a young age or had other problems with their vision.

1. Daily routine is very important in preventing myopia. Get enough sleep, go out for more walks, and stop giving kids toys as toys.
2. Give enough water and liquid juices throughout the day.
3. Parental control over the consumption of foods rich in vitamin A.
4. Treatment of children's myopia consists of exercises on special devices, drug treatment and surgical methods. The goal is to stabilize the process of lengthening the eyeball and stop the progression of the disease. Modern medical methods are able to solve any complex problems and save vision in 80% of cases when the disease is detected at its source and properly treated.

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